

Observations.—This specimen carries a large number of ova containing embryos that are far advanced in development, a circumstance that has enabled me, after much trouble and care, to determine the form of the brephalos.

The ovum is about 0.3 mm. (0.012 in.) in diameter, and is perfectly round. By the aid of liquor potassæ I was able to make out the form of the eyes, since they were projected on long stalks. The outer or second pair of antennæ is small and cylindrical, but the first or inner pair I could not determine, nor the exact form of the carapace, and I am therefore doubtful whether it only covers and protects the cephalon as in the brephalos of *Palinurus*, or overlies the pereion also, as figured by De Haan in his species of *Phyllosoma guerini*, which has all the appearance of being a more advanced stage of a young *Scyllarus* or *Ibaccus*.

Three pairs of pereopoda are well advanced, and carry a basecephysis or branch springing from the extremity of the second or basal joint, which is also well developed in the two anterior pairs, but represented only by a small bud-like process in the third.

The pleon is short and rudimentary. The entire brephalos, when outstretched at the period of extraction from the egg, was about 0.5 mm. (0.02 in.) in length, measuring from the frontal margin between the eyes to the telson, and resembles the *Phyllosoma* of *Palinurus* in its general appearance.

This species was taken on the 10th of February 1873, in 78 fathoms of water, with two smaller specimens that I am inclined to consider as immature forms of another species, the reasons for which are given in the description of *Arctus immaturus*.

The temperature of the bottom water is not recorded, no temperature sounding having been taken at this station.

Family PALINURIDÆ.

Carapace longitudinally sub-cylindrical, ophthalmopoda having orbits only partially excavated in the cephalon, second pair of antennæ terminating in a long rigid multi-articulate flagellum.

This family forms the tribe of "Langoustiens," which contains but one genus *Palinurus*, and this Milne-Edwards has in his *Histoire des Crustacés* divided into two subgenera, "Langoustes ordinaires," of which *Palinurus vulgaris* is the type, and "Langoustes longicornes." This latter he again subdivides into—(1) those species which have the pleon transversely furrowed, of which *Palinurus guttatus* is the type; and (2) those in which the pleon is not furrowed, of which *Palinurus fasciatus* is the type.

More recently Dr. Camil Heller, in his volume on the Crustacea which were taken during the cruise of the frigate "Novara," has, like Milne-Edwards, arranged the species under one genus, which he places in two divisions, as follows—